FCS Training IPT

Future Combat Systems
One Team -- The Army / DARPA / Industry

Briefing for

NET3 Conference
FCS Training

presented by

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Embedded Training…..
a DoD plan ; an Army Commitment

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"Build an Integrated Live, Virtual, and Constructive Training Environment. The ultimate goal is to develop a transformed training capability that provides accurate, timely, relevant, and affordable training and mission rehearsal in support of specific operational needs. Training must be a living process with the ability to adapt and respond quickly to the dynamic challenges of the national security environment. This will require the ability to identify potential crisis situations in real time; conduct course-of-action analyses; utilize continuously available networks for mission rehearsal, simulation and just-in-time training; and measure performance systematically to improve operational effectiveness."

Strategic Plan for Transforming DoD Training, 1 Mar 02

UA/FCS Training Concept

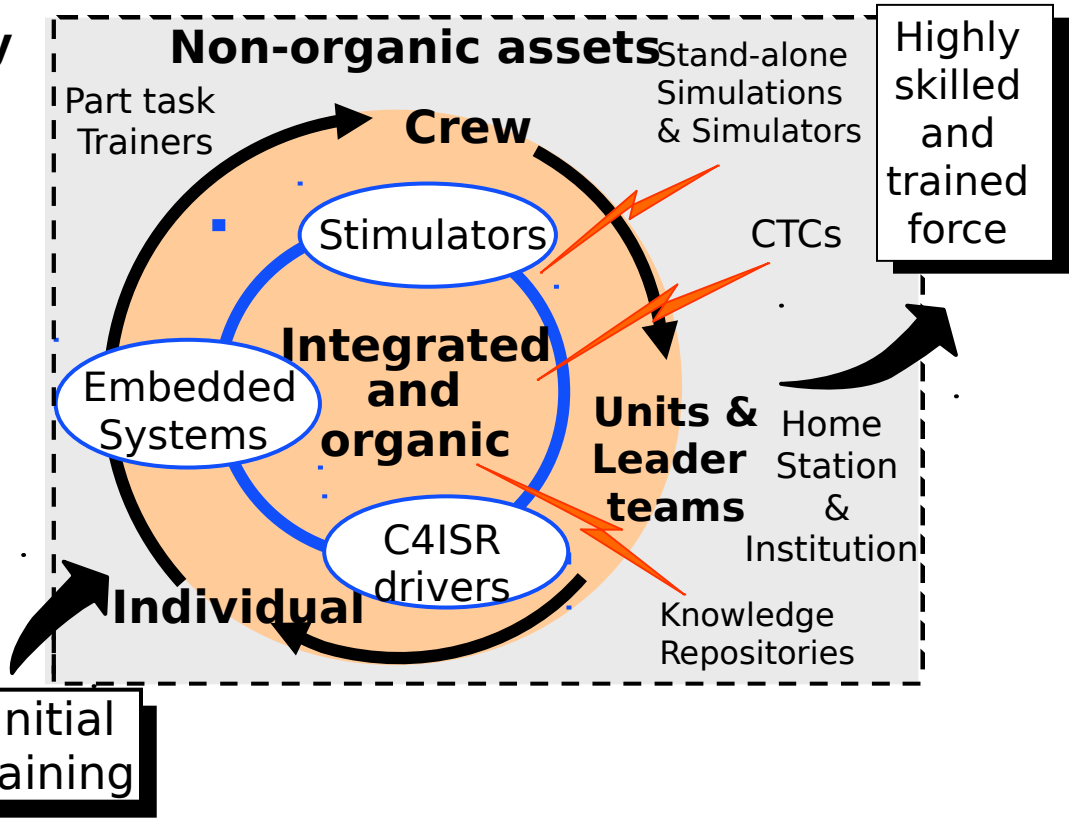
Training is THE factor in determining the victor.

- DSB Task Force on Training Superiority and Training Surprise

- **Expanded training availability using organic, integrated, embedded systems - Training, Operations, and Mission Planning/ Rehearsal – for full spectrum training including JIM**

- **Full range of training task representation - individual, crew, collective, and leaders – embedded or 'reach' via C4ISR system**

- **Reduced training burden & cost resulting from product lir design approach - maximum commonality between operational and training systems.**



Training Systems Capabilities

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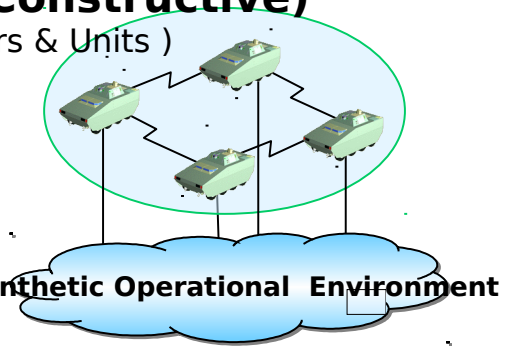
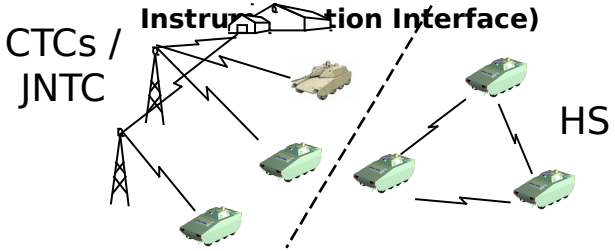
Embedded Task Training
(Crews & Soldier)

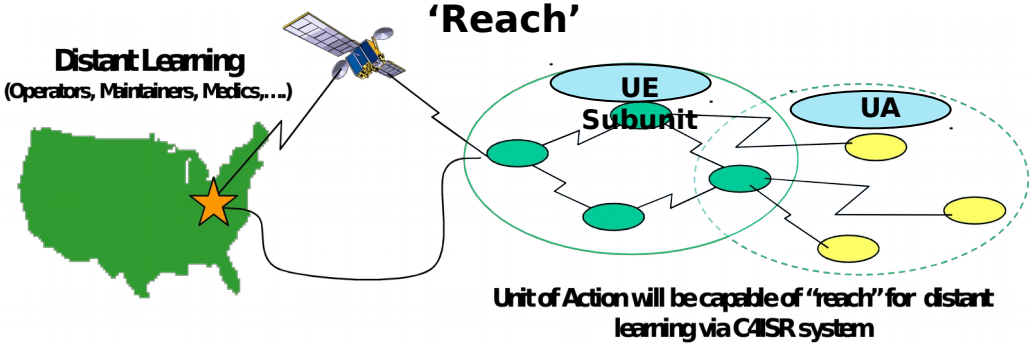
Distributed, Collective Training (Virtual & Constructive)
(Leaders & Units)



Distributed, Collective Training (Live)
(Embedded MILES & CTC Instrumentation Interface)



'Reach'



FCS ORD Training Requirements

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Base ORD (Paragraph 4)	
1093	Networked "tiered" embedded Full Task Trainer
3341	Institutional Training Support
1253	Multi-echelon combined arms training capability
3783	Standalone TADSS
2840	Interoperability w/legacy & interim Syn Tng Env
1078	FTT - Soldier, Crew, Small Unit, Dism't Soldier
1089	Embedded TESS
3816	On-board repository of Training products
3817	AAR System
3818	Embedded Tng Mgt System (Interface w/C4ISR)
3819	Embedded Computer Generated Forces - OneSAF
3782	Training Support Packages (TSPs)
3784	Interoperability w/FCS networks & info systems
3786	Conform to FCS MANPRINT, MPT, & QQPRI
3785	Tng info network w/automated link to IETMS
ANNEX A - C4ISR	
2323	Battle Command sys spts tng & garrision ops
3156	Interface w/legacy,interim,OF (provides reach)
1139	Mission Planning and Rehearsal System
ANNEX D - Manned Systems	
1079	Out-the-Window (OTW) view - 3D
2862	Train with engine off
1097	Train without radio propogation
1084	Detachable PDA

ANNEX B - Leader Development	
3122	PME tng & knowledge repository 24/7 via C4ISR
3123	PME training focus-high stress Ldrshp dilemmas.
3125	Web-based emulation of the FCS Battle Cmd sys
3126	Interactive multimedia instruction pkgs for Ldr tng
3128	AC/RC capabilities and organizations courses
3130	J oint, Inter-Agency, & Multinational virtual tng
3136	Virtual campuses
3137	Capture Ldr responses and actions
3138	24/7 world wide reach to Training Institutions
3131	Battle Command SOPs and spt
3133	Opnl doctrine updated to account for LL'd.
ANNEX C - Soldier	
3478	"Requisite TADSS" for dismounted training
3211	Onboard storage of tng data, pers records & SOPs
ANNEX F - Sustainment	
2756	Full set of IETM for operators & Maintainers
3767	Desktop training
3768	Part Task Trainers (PTT)
2854	SCORM/AOM Compliant Courseware

Reflects 22 Jan '03 ORD

Training Products

- Mission & Task Analyses
- Embedded Training system
  - Driver Trainer
  - Weapons Trainer
  - RSTA Trainer
  - Battle Command Trainer

  } Each contains a progressive performance matrix (a la UCOFT)
- Stand-Alone Training Systems (reconfigurable) for those tasks which are unsafe, unaffordable or impractical for embedded training; expected primary support for institutions.
  - High fidelity
  - Desk-top

  } Each Stand-alone trainer reuses ET code
- Maintenance Trainers
- Training Support Packages (TSPs) – Individual & Collective
  - Level V IETMs
  - Simulation-based TSPs
  - Interactive Multimedia Instruction (IMI)

Training KPP

The FCS FoS must have an embedded individual and collective training capability that supports live, virtual and constructive training environments.

Rationale: Embedded full task and tactical engagement simulation systems provide leaders with a readily available system for training and assessing Combat Critical Skills of soldiers; and provide the capability to train and assess crew/sections, dismounted soldiers, and multi-echelon combined arms skills in operational environments.

Critical Enabling KPP Requirements

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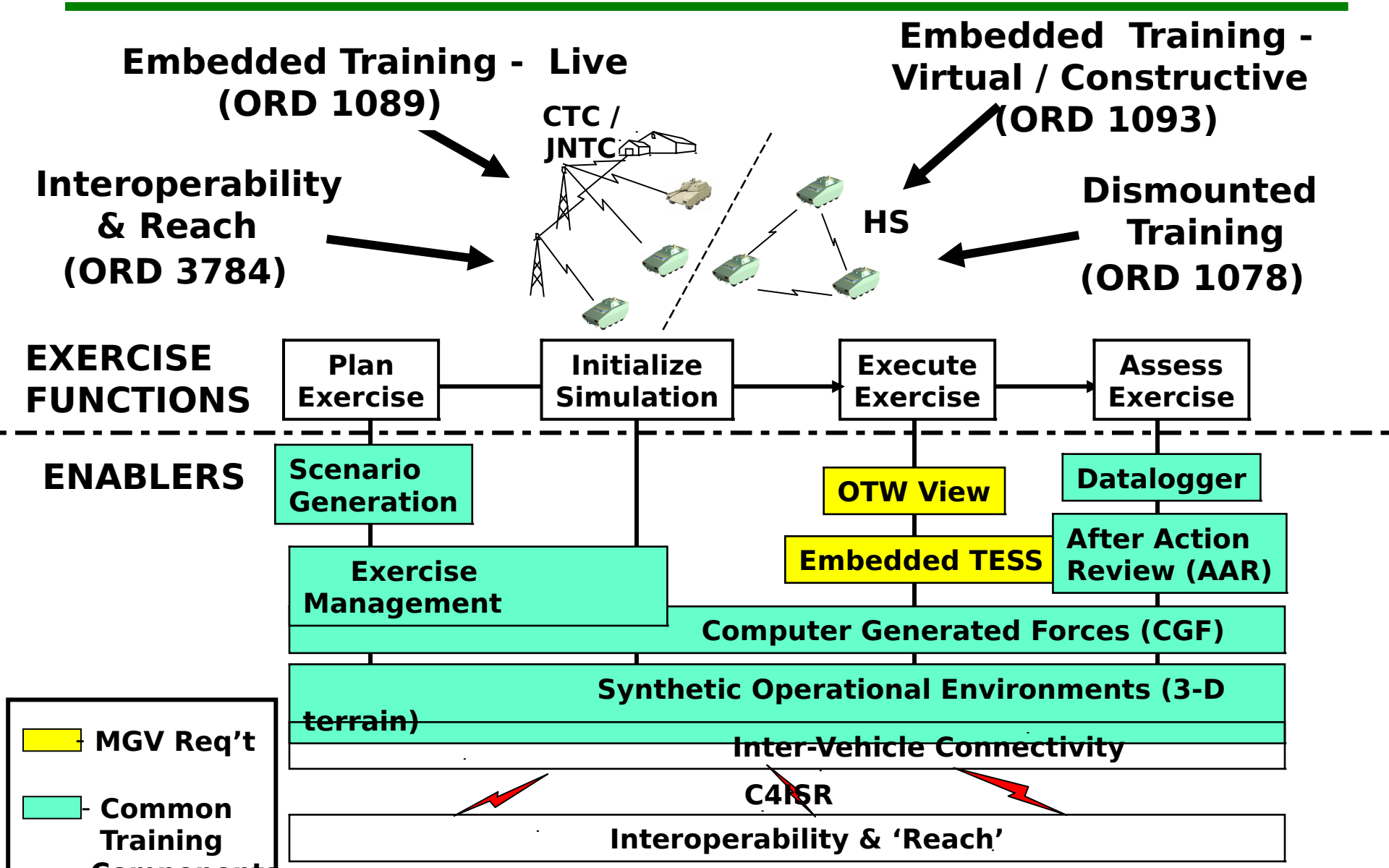

Dependencies and constraints

- Warrior Machine Interface (WMI)
- System of Systems Common Operation Environment (SoS COE) common services
- Vetronics – common vehicle bus, intra vehicle applications connection to switches, knobs, dials and controls.
- Use of System communication services (JTRS/ WIN-T) for distributed training applications and reach.
- Use of Manned Ground System integrated computer resources
- Use SoS [illegible]nd Security services

Acquisition Strategy

- Development IAW the FCS training architecture
- Separate CLIN for training in all procurement packages

Summary

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- Embedded Training is the user's default option
- Enabling technologies are sufficiently mature
- Procurement strategy is well defined and understood by LSI
- Integration is the challenge

Backup

Day to Day Execution Management Structure

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PM, Future Combat Systems
BG Donald F. Schenk

DPM for Program Integration
COL(P) J. Bartley

DPM for Operations
Mr. R. Asoklis

Executive Support

Program Manager – LSI
Mr. Dennis Muilenburg*

Deputy Program Manager – SAIC
Mr. John Gully*

One Team Council
(PM of Major Teammates)

* = Office of the Program Manager

Industry Team Leader

Army Team Co-Leader

Advanced Programs
Mr. Roy Minson*

Independent Reviews & Risk Management - Mr. Frank De Mattia*
Mr. Roland Asoklis

Supplier Management
Mr. Steve Marion*
Mr. Ignacio Cardenas

Business Management
Mr. Jeff Worley*
Mr. Brian Smith/Mr. Ignacio Cardenas

Software & Distributed Systems
TBD*
Mr. Edgar Dalrymple

System-of-Systems' Integration
TBD*
Mr. Scott Davis

System-of-Systems' Integration

Advanced Collaborative Environment
Mr. Rich Crispo
LTC Kyle Burke

System-of-Systems Eng. & Integration
Mr. Jim Anderson
Ms. Bobbe Desmond

Integrated Simulation & Test
Dr Peter Cherry (SAIC)
LTC Kyle Burke
Dr Dave Brown

Complementary Programs
Mr. Brad Cohen
COL(P) John Bartley

Logistics Systems
Mr. Pat Bennett
Ms. Nancy Moulton

Training Systems
Mr. Jim Shiflett (SAIC)
COL Matt Fair

Force Development
Mr. Jack Schmitt
COL Chuck Waggoner

Business, Technical & Programmatic Integration

Administration/PMO*
Mr. Ralph Moslener

Chief Engineer *
Mr. Rich Collins

Chief Scientist & Architect*
Dr. Ed Brady (SAIC)

Communications
Ms. Felicia Campbell

Human Resources
Mr. Jim Caesar

IDS & PW Integration
Mr. Roy Minson (acting)

Legal
Mr. Ron Fouse

LRIP & Production Plng
Ms. Courtney Weiss

Operations
Ms. Courtney Weiss

Program Protection / Industrial Security
TBD

Quality
Mr. Dan Meyer (acting)

Strategic Business Development
Mr. Bob Mitchell II

Systems' Integration

C4ISR Systems' Integration
Mr. Don DePree
COL Jon Maddux

Manned Ground Vehicle Systems' Integration
Mr. Dick Williams
COL Don Kotchman

Unmanned Air Vehicle Systems' Integration
Mr. Mark Franzblau
COL John Burke

Unmanned Ground Vehicle Systems' Integration
Mr. Alan Walls (SAIC)
COL Terry Griffin

Lethality Systems' Integration
Mr. Charlie Williams
COL Russ Hrdy

Soldier Systems' Integration
Mr. Charlie Williams
Mr. Russ Guckert

Concept& Technology Dev
Dr Keith Taggart (SAIC)
COL William Johnson

Training Systems Integration Team Structure